

b.) Amendments to the Specification:

A. Please amend the fourth paragraph on page 1, continuing onto page 2, as follows:

Most transparent electrodes are made from metal or metal ~~oxide~~-oxide coatings applied to an optically transparent substrate by, for example, vacuum deposition, chemical vapor deposition, chemical bath deposition, sputtering, evaporation, pulsed vapor deposition, sol-gel methods, electroplating, and spray pyrolysis. When desired, these coatings can be patterned with costly photolithographic techniques. This process is difficult and expensive to scale up to cover large areas with electrodes. In addition, the resulting coating, being based on a metal oxide, is rigid thereby preventing use in flexible applications such as in plastic displays, plastic solar voltaic, and wearable electrical circuitry.

B. Please amend the second paragraph beginning at line 9 on page 7, as follows:

Films and coatings of the invention may range in thickness between about 0.5 nm or less to about 1,000 microns or more. In a preferred embodiment, the layer may further ~~comprises~~ comprise a polymeric material. The polymeric material may be selected from a wide range of natural or synthetic polymeric resins. The particular polymer may be chosen in accordance with the strength, structure, or design needs of a desired application. In a preferred embodiment, the polymeric material comprises a material selected from the group consisting of thermoplastics, thermosetting polymers, elastomers and combinations thereof. In another preferred embodiment, the polymeric material comprises a material selected from the group consisting of polyethylene, polypropylene, polyvinyl chloride, styrenic, polyurethane, polyimide, polycarbonate, polyesters, fluoropolymers, polyethers, polyacrylates, polysulfides, polyamides, acrylonitriles, cellulose, gelatin, chitin, polypeptides, polysaccharides, polynucleotides and mixtures thereof. In another preferred embodiment, the polymeric material comprises a material selected from the group consisting of ceramic hybrid polymers, phosphine oxides and chalcogenides.

C. Please amend the second full paragraph beginning at line 16 on page 15, as follows:

Furthermore, some materials (like CNTs) lend themselves to more easily fabricate these desirable patterns due to self-assembly characteristics. Layers can be accomplished using any conductive material that can be patterned at the correct dimensions for a given spectral range. It is possible to form these patterned conductors using vapor deposited metal films which have been etched after lithographic techniques. The combination of processing steps required makes

the whole process very expensive to ~~complete~~compete with existing ITO operations. The value of this disclosure is in the use of conductive materials which spontaneously form a network or pattern as a result underlying physical properties inherent to the material. Single-walled and small diameter (<10 nm) double-walled carbon nanotubes may form ropes of individual nanotubes in their natural state. Roping can be exploited to form networks or screens on a surface which have open structures and a more detailed pattern than practically possible at this scale. Patterning can be encouraged through the use of surface preparation techniques such as scratching or rubbing.